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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/541,548

04/10/2006

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06/14/2007

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EXAMINER

TRAN, DIEM T

ART UNIT

PAPER NUMBER

3748

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DELIVERY MODE

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/541,548	RIGAUDEAU ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Diem Tran	3748	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
  - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
  - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |  |
|--|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                 | 5) <input type="checkbox"/> Notice of Informal Patent Application                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date ____ | 6) <input type="checkbox"/> Other: ____  |

### DETAILED ACTION

The preliminary amendment filed on 7/6/05 has been entered. Claims 1-12 have been amended. Overall, claims 1-12 are pending in this application.

#### *Specification*

The disclosure is objected to because of the following informalities:

-The following headings of the specification are missing, such as:

- *Background of the Invention.*

- *Brief Summary of the Invention.*

-*Brief description of the drawing(s)* as required by 37 FR 1.74. Appropriate corrections are required

#### *Claim Objections*

Claims 1, 4, 5 are objected to because of the following informalities:

-In claims 1, lines 18, 19, --at least one of-- should be inserted after “monitoring” and “and/or” should be changed to --and--.

-In claim 4, lines 1, 2, --at least one of-- should be inserted after “also” and “and/or” should be changed to --and--.

-In claim 5, line 2, --at least one of-- should be inserted after “also” and “and/or” should be changed to --and--. Appropriate corrections are required.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

***Claims 1-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ito et al. (US Patent 6,378,297) in view of Schafer-Sindlinger et al. (US Patent Application 2004/0065078).***

Regarding claim 1, Kume discloses a system for assisting regeneration of a particle filter integrated in an exhaust line of a motor vehicle diesel engine, the engine being associated with various units, including:

means for admitting air into the engine; means (24) for recycling exhaust gases from the engine to the inlet thereof; a turbocompressor (14); a particle filter (21) including a filter medium adapted to trap particles of soot present in the exhaust gases of said engine; an oxidation catalytic converter on the upstream side of the particle filter in the exhaust line (see Figure 23, col. 19, lines 66-67, col. 20, lines 1-4); a common system (26) for feeding fuel to the cylinders of the engine, including electrical fuel injectors associated with those cylinders (see col. 3, lines 27-32); means for acquiring information relating to various operating parameters of the engine and the units associated therewith; means for monitoring the operation of the air admission means, the recycling means, and the fuel feeding system in order to monitor the operation of the engine, these means being further adapted to trigger a phase of regenerating the particle filter by

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combustion of the particles trapped therein by triggering a phase of multiple injections of fuel into the cylinders of the engine during their expansion phase (see Figures 10, 12, col. 19, lines 6-20, 29+); however, fails to disclose adding to the fuel an additive to reduce the combustion temperature of particles trapped in the particle filter, and said filter medium of said particle filter is coated with a material capable of constituting a reserve of oxygen adapted to propagate the combustion of the soot during an operation of regenerating the particle filter.

Schafer-Sindlinger teaches that it is conventional in the art to add an additive to the fuel to reduce the combustion temperature of particles trapped in the particle filter (see page 1, par. [4]), and a filter medium of a particle filter is coated with a material capable of constituting a reserve of oxygen adapted to propagate the combustion of the soot during an operation of regenerating the particle filter (see page 1, par. [10], page 5, par. [78]).

It would have been obvious for one having ordinary skill in the art, to have utilized the teaching of Schafer-Sindlinger in the Ito system, since the use thereof would have saved fuel due to a lower required soot combustion temperature.

Regarding claims 2, 3, Schafer-Sindlinger further teaches that material is cerium oxide or is a mixed oxide of cerium and zirconium (see page 3, par. [32]).

Regarding claims 4-6, Schafer-Sindlinger further teaches that the particle filter is also coated with a catalyst such as platinum for encouraging the triggering of reactions tending to reduce the pollutant emissions of the engine (see abstract).

Regarding claim 7, Schafer-Sindlinger further teaches that the distribution of the various materials in the filter is non-uniform (see page 4, par. [39]).

Regarding claim 8, Schafer-Sindlinger further teaches that material capable of constituting a reserve of oxygen is preferentially disposed in the downstream region of the inlet passages of the filter (see pages 3, 4, par. [31, 38]).

Regarding claim 9, Schafer-Sindlinger further teaches that the catalyst encouraging the triggering of the combustion of the soot is preferentially disposed in the upstream region of the inlet passages of the filter (see page 4, par. [37]).

#### ***Allowable Subject Matter***

Claims 10-12 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

#### ***Conclusion***

Any inquiry concerning this communication from the examiner should be directed to Examiner Diem Tran whose telephone number is (571) 272-4866. The examiner can normally be reached on Monday -Friday from 8:30 a.m.- 5:00p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas E. Denion, can be reached on (571) 272-4859. The fax number for this group is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

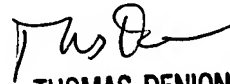
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applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 800-786-9199 (toll-free).



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